Department of Regional Development, Primary Industry, Fisheries and Resources
Northern Territory Geological Survey
Australia

User's Guide

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1. INTRODUCTION

The Northern Territory Geological Survey (NTGS), with its goal to encourage exploration activity in the Northern Territory of Australia, offers its web-mapping tool "Spatial Territory Resource Information Kit for Exploration" (STRIKE). It enables internet users to view, query and download relevant geoscientific data.

Website: http://apps.minerals.nt.gov.au/strike

Users of STRIKE have the ability to:

- Create and print customised maps
- Select a point on the map and show the associated data from all visible map layers
- Manipulate transparency of geophysical images and combine them with vector data
- Retrieve data for a specified layer for a selected area of the map
- Select historical exploration tenements and retrieve relevant records
- Download attribute data files
- View metadata for datasets

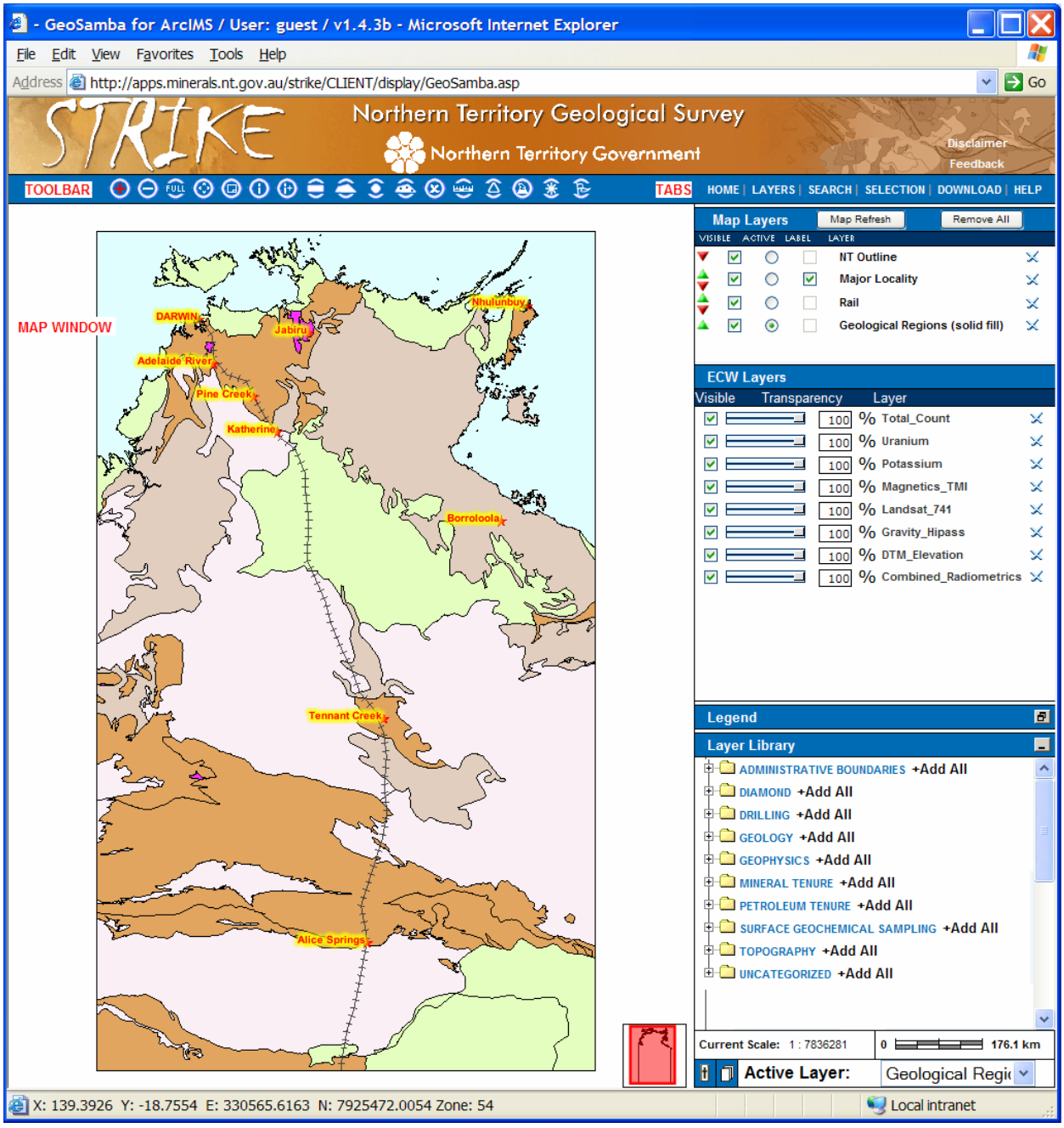
2. SYSTEM REQUIREMENTS

Internet Connection:	Dial-up or Broadband (preferred)
Recommended Browser:	Internet Explorer 5.5 or higher
Recommended Screen Resolution:	1024 x 768 pixels or higher
Image Web Server ECW Plug-in:	Available to install from STRIKE homepage or visit site: http://www.dme.nt.gov.au/ecwplugins/DownloadIEPlugin.htm This plug-in is required for viewing ECW images.

3. USER INTERFACE

The STRIKE web mapping user interface is composed of:

Banner, Disclaimer and Feedback Section
Tabs
Toolbar
Map Window
Map Layers
Map Legend
Layer Library
Coordinate Readout in GDA94 and MGA94
Scale Bar
Overview Map
Active Layer



4. TABS

There are six tabs in STRIKE:

4.1 Home

It is the tab that is used to take you back to the default STRIKE information page.

4.2 Layers

This tab provides the settings to modify the viewable properties of the map layers and it offers three options:

Map Layers – gives you the ability to configure the visibility and order of each layer as well as selecting which layer is to be the active layer.

Legend – is an object representing a “Table of Contents” for the individual layers contained within the map window.

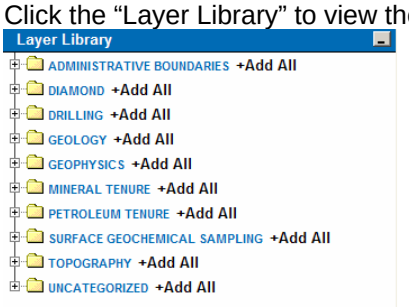
Layer Library – Layers in the layer library are organised by categories and the list of available layers are listed in Appendix A.

Adding Layer(s):

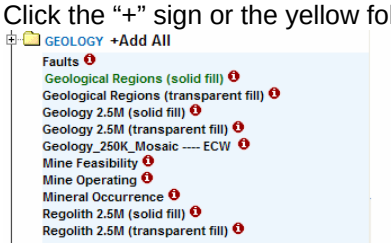
1. From the “Links” menu, click “Layers”

The “Layer Library” will appear at the bottom-right corner of your browser

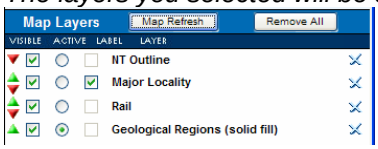
2. Click the “Layer Library” to view the layer categories



3. Click the “+” sign or the yellow folder to expand/un-expand categories



4. Add one layer at a time by clicking the layer name or use “+Add All” to add all layers
   The layers you selected will be added on the “Map Layers” list

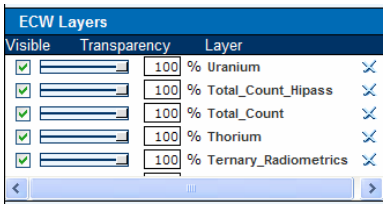


5. Click the “Map Refresh” button to update the Map Window

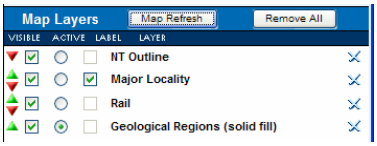
Vector and Image Layers
Computer graphics can be generated as either vector or raster images. Vector layers are made out of points, text, lines and polygons that are based on mathematical formulas. Raster layers are bitmaps that composed of pixels that collectively produce an image – similar to what you see on TV.

The Geophysics folder in the layer library contains geophysical raster layers (marked with ECW) that are served from the NTGS' Image Web Server. You can add multiple raster layers and control their transparency using the slider or by entering the opacity percentage and overlay vector data.

To update the map window after composing your map layers, always click the "Map Refresh" button that is located on the Map Layers panel.



4.3 Map Layer Controls



Visible
Red and green arrows are the buttons used in positioning the layer order of appearance on the map window. The square radio buttons turns on and off layer visibility.

Active
This is used to set the active layer and is used with the "Identify" and "Point Drill Down" buttons.

Label
Most layers have preset label, use this to turn on and off labels.

Remove Layer
To remove a layer, just click on the layer's corresponding blue X icon.
To remove all layers, use the "Remove All" button.

Note: Every time the map layer configuration is changed you must click the "Map Refresh" button to reflect the changes on the map window.

4.4 Search
By clicking on the Search tab, a list of predetermined searches is available to query data sets.

To perform a search:
1. Click on the tab to for the search category you would like to perform
2. Enter information in the search criteria box or select from the drop-down list
3. Click on the "Do Search" button

The search will be performed based on the information entered and will return records if found.

Predetermined searches are listed in Appendix B.

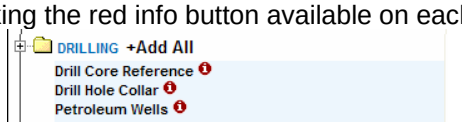
4.5 Selection

This tab allows you to view information on features that have been selected or identified by the user on the current active layer. The information is initially presented in a summary format, with the ability to access more detailed information on request.

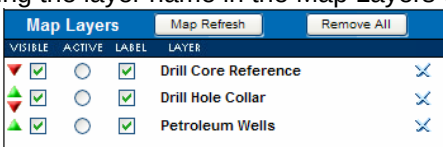
5. METADATA

Most of the layers in STRIKE have accompanying metadata and there are two ways to access metadata.

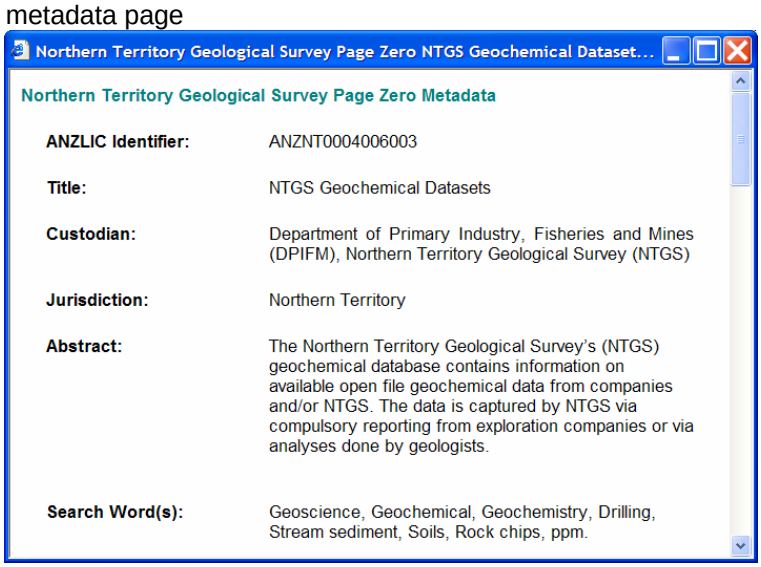
By clicking the red info button available on each layer in the layer library.



By clicking the layer name in the Map Layers window



Sample metadata page


Northern Territory Geological Survey Page Zero NTGS Geochemical Dataset...
Northern Territory Geological Survey Page Zero Metadata
ANZLIC Identifier: ANZNT0004006003
Title: NTGS Geochemical Datasets
Custodian: Department of Primary Industry, Fisheries and Mines (DPIFM), Northern Territory Geological Survey (NTGS)
Jurisdiction: Northern Territory
Abstract: The Northern Territory Geological Survey's (NTGS) geochemical database contains information on available open file geochemical data from companies and/or NTGS. The data is captured by NTGS via compulsory reporting from exploration companies or via analyses done by geologists.
Search Word(s): Geoscience, Geochemical, Geochemistry, Drilling, Stream sediment, Soils, Rock chips, ppm.

6. TOOLBAR

There are currently 17 tools available in STRIKE and their usage is explained as follows.

6.1 Zoom In Tool

The “Zoom In” tool allows you to zoom into a selected segment of the map on display.

To use the “Zoom In” tool, keeping the left mouse button pressed, click on the map and drag your mouse over the feature you would like to zoom into. You will notice that a red transparent box will highlight the area you will be zooming into. Once you have selected the area of interest, release the mouse button. The map will refresh and zoom into the selected area.

You can also do single left-mouse click on the map and the system will centrally zoom-in at that point with the zoom factor set by the STRIKE administrator.

6.2 Zoom Out Tool

The “Zoom Out" tool allows you to zoom out of a selected segment of the map and display a larger map image.

To use the "Zoom Out" tool, keeping the left mouse button pressed, click on the map and drag your mouse over the feature you would like to zoom out. You will notice that a red transparent box will highlight the area you will be zooming out of. Once you have selected the area of interest, release the mouse button. The map will refresh and zoom out to display a larger map image.

You can also do single left-mouse click on the map and the system will centrally zoom-out at that point with the zoom factor set by the STRIKE administrator.

6.3 Zoom to Full Extent Tool

The "Zoom to Full Extent" tool allows you to zoom out to the full extent of the map on display.

To use the "Zoom to Full Extent" tool, just click on the icon. The map will refresh and you will be able to see the full map image.

6.4 Pan Map Tool

The "Pan" tool allows you to move the map in any direction whilst keeping the same scale (zoom) ratio.

To use the "Pan<" tool, keeping the left mouse button pressed on the map, drag your mouse in the any direction. For Example: If you drag your mouse to the left, the map image will move left.

Once you have panned to an area of interest, release the mouse button so the map can refresh.

6.5 Overview Map

The "Overview Map" window provides the user with the ability to establish their current location (via the slightly transparent red box) on the map in comparison to the maps full extent.

6.6 Identify Feature Tool

The "Identify Feature" tool allows you to select a feature within the active layer. To use the "Identify Feature" tool, activate the layer you would like to make a feature selection on, and then click on the feature.

The feature selected will become highlighted and any details associated with that feature will be displayed in the right hand side "Selection" panel. To identify more than one feature at a time, use the "Rectangular Selection", "Polygon Selection" or the "Circular Selection" tools.

6.7 Point Drill Down Tool

The "Point Drill Down" tool allows you to select multiple features on all active visible layers within a selected spatial position. To use the "Point Drill Down" tool, zoom or pan your map until you get to the point you would like to make your feature selection on, then click on the feature. After you have clicked on the map, that point will become highlighted and any configured textual information for the layers will be displayed in the right hand side "Selection" panel.

6.8 Rectangular Selection Tool

The "Rectangular Selection" tool allows you to select multiple features within a user defined rectangle on the active layer.

To use the "Rectangular Selection" tool, activate the layer you would like to make a feature selection on, then keeping the left mouse button pressed, drag your mouse over the features you would like to select. You will notice that a red transparent box will highlight the area you will be selecting. Once you have selected the area of interest, release the mouse button.

The map will refresh and the features within the boundaries of your selection will become highlighted and any details associated with those features will be displayed in the right hand side "Selection" panel.

6.9 Polygon Selection Tool

The "Polygon Selection" tool allows you to select multiple features within a user defined area on the active layer.

To use the "Polygon Selection" tool, activate the layer you would like to make a feature selection on, then click individual points on the active layer. You will notice that a red transparent shape will highlight the area defined my each of the points selected. Once you have defined the area of interest, double-click your mouse button to finalise your selection.

The map will refresh and the features within the boundaries of your selection will become highlighted and any details associated with those features will be displayed in the right hand side "Selection" panel.

6.10 Circular Selection Tool

The "Circular Selection" tool allows you to select multiple features within a user defined rectangle on the active layer.

To use the "Circular Selection" tool, activate the layer you would like to make a feature selection on, then click on the map once (this becomes the centre point of your circle) and slowly drag your mouse away from that point to cover the features you would like to select. You will notice that a red transparent circle will highlight the features you will be selecting. Once you have selected the area of interest, click your mouse button once more to finalise your selection.

The map will refresh and the features within the boundaries of your selection will become highlighted and any details associated with those features will be displayed in the right hand side "Selection" panel.

To identify just one feature at a time, you will need to use the "Identify Feature" tool.

6.11 Points Within a Polygon

The “Points Within A Polygon" tool allows you to select single or multiple polygon features on the current active/visible layers and display all point layer features that fall within that polygon feature.

To use the "Points Within A Polygon" tool, zoom or pan your map until you get to the polygon you would like to use as the drill down tool. After you have selected the polygon you wish to use as your drill down tool, all the point attributes displayed in the right hand side "Selection" panel.

6.12 Clear Selection Tool

The "Clear Selection" tool allows you to clear any selections created or currently be displayed within the active layer.

To use the "Clear Selection" tool, just click on the icon. The map will refresh and any selections will be cleared.

6.13 Measure Tool

The "Measure" tool allows you plot a series of points within the active layer and calculate the total distance covered by those points.

To use the "Measure" tool, activate the layer you would like to make a measurement on, then click individual points on the active layer. You will notice that a red line will join each point as they are clicked and that the “Total Distance" box will be automatically updated with the total distance covered.

Use the "Clear Selection" tool if you make a mistake or would like to calculate a new distance.

6.14 Measure Area Tool

The "Measure Area" tool allows you plot a series of points within the active layer and calculate the total area covered by those points.

To use the "Measure Area" tool, activate the layer you would like to make a measurement on, then click individual points on the active layer. You will notice that a red line will join each point as they are clicked and that the “Total Area" box will be automatically updated with the total area covered.

Use the "Clear Selection>" tool if you make a mistake or would like to calculate a new area.

6.15 Annotation Tool

The “Annotation” tool allows you to draw points, lines and text on the map for highlighting your particular interest.

To use the “Annotation” tool, just click on the icon and instructions will be shown to you on-screen.

Bug Note: Once this tool is activated and you click Points, Lines or Text button but did not complete the annotation information required, the system will display “Please make sure you have selected / entered all the information for the tool” and the “Loading” indicator will keep flashing and you will wait forever. To fix this, click the “Layers” link then click the “Zoom to Full Extent” tool.

After using this tool, you may go back to the STRIKE default page by clicking the “Home” tab.

6.16 Zoom to Point Tool

The “Zoom to Point” tool allows you to zoom into selected portion of the map by specifying the X and Y coordinates as the centre point of the zoom area.

To use the “Zoom to Point” tool, just click on the icon and enter the X and Y coordinates and click the “Show” button. Ensure that the Y coordinate is in negative value for southern hemisphere latitude i.e. -24.

The system will zoom into the coordinates you specified and will temporarily mark it with a magenta colour drillhole symbol.

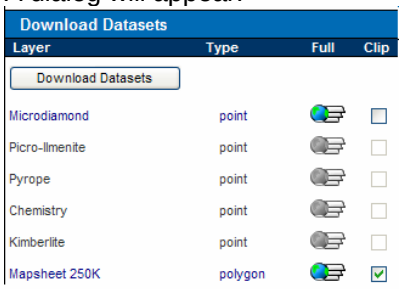
7. DOWNLOAD

This “Download” tab is used to download data made available by NTGS. You can download a full or clipped set of the data.

To download data:

1. Ensure that the layer(s) you want to download are added in the Map Layers.
2. Click the “Download” tab, located at the top-right of browser.

   A dialog will appear:



   Note: Grey text indicates the layer is not downloadable as it is not yet added in the Map Layers or it was meant to be not downloadable as set by NTGS.

3. For full dataset download just click the world icon on the layer

4. For clipped download, check the square box of the layers and click “Download Datasets” button.

The download function will then prompt you for the destination folder where you want to save the dataset.

8. PRINTING

Print Map Tool

The "Print Map" from the Tools menu allows you to take the current map image and produce a high quality printable image.

To use the "Print Map" tool, just click on the icon. A new window will open and display the current map image, legend, company logo, map generation date and disclaimer.

Note: The image resolution of the print map image is of a much higher quality than the image displayed on the main screen and when printing will use slightly more ink.

9. HELP

The “Help” tab can be used to gain extra insight into STRIKE and its functions. The help page provides you with an interactive user reference.

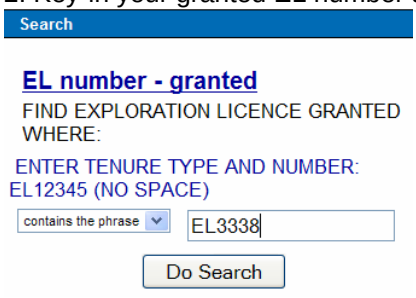
For further assistance in using STRIKE please contact:
Minerals & Energy Information Centre
Phone: +61 8 8999 6443
Email: Geoscience.Info@nt.gov.au

10. EXAMPLES

10.1 Searching historical tenements and exporting associated company reports on an existing Granted Exploration Licence

1. From the tabs bar, click the SEARCH tab, and then click the Tenure folder, and select EL number - granted

2. Key-in your granted EL number and click the Do Search button as shown below.



3. The search result will be highlighted on the map window and details will be shown.

Click the “show on map” so that the map window will zoom-in to the EL you searched for.

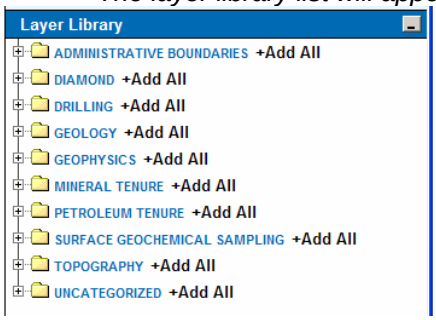
4. From the tabs bar, click the LAYERS tab.

The layer library bar, shown below, will appear at the bottom right corner of the webpage

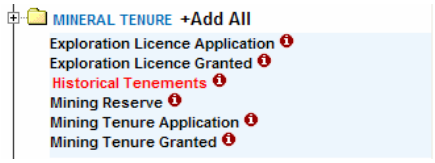
5.

Open the Layer Library by clicking on its label on the blue bar.

The layer library list will appear

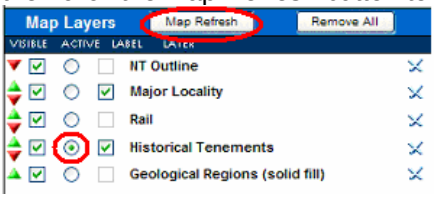


6. Click the Mineral Tenure to expand its list and click on Historical Tenements layer to add it on the map layers list.



The historical tenements layer will be added on the map layers panel.

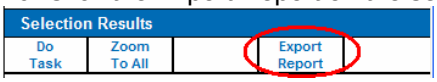
7. On the map layers panel, make the historical tenements active by turning on the circle button next to it, then click the Map Refresh button to make the tenements visible on the map window.



9. Click the Rectangular Select tool, then on the map window, point and keep the left mouse button pressed and drag your mouse over the granted EL and release the mouse button.

Selections that intersects the granted EL will be listed on the Selection Results panel

10. Click the Export Report on the selection results panel



A download window will appear, follow the prompts to save the file in your chosen filename and destination. The exported file format is in CSV (comma separated value) which you can open using Microsoft Excel or other Text Editor programs.

10.2 Downloading geochemical data for a particular area

1. Use the Zoom In tool, point on the map and keep the left mouse button pressed, and drag your mouse over the area you would like to zoom into. You will notice that a red transparent box will highlight the area you will be zooming into. Once you have selected the area of interest, release the mouse button.

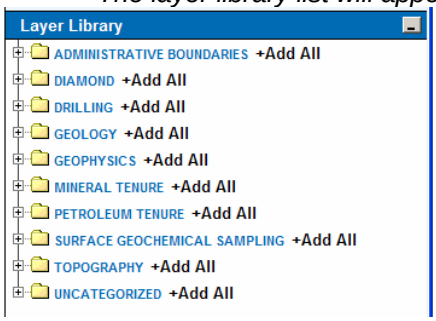
2. From the tabs bar, click the LAYERS tab.

The layer library bar, shown below, will appear at the bottom right corner of the webpage

3.

Open the Layer Library by clicking on its label on the blue bar.

The layer library list will appear



4. Click the Surface Geochemical Sampling to expand its list and click on +Add All to add all geochemical layers on the map.

This dataset is large, monitor the progress bar at the bottom of webpage and wait for it to finish then click the Map Refresh button to view the data on the map.

5. Click the Download tab and you can now export all the available geochemical layers in Full NT Wide dataset or Clip dataset as per your map window zoom extent.

5.1 Full NT Wide Dataset:

For each geochemical layer, click its icon and follow the prompts.

5.2 Clip dataset:

Tick the square box next to the layers you require, then export them in one hit by clicking the button

(shown at the top of the layer list) and follow the prompts.

APPENDIX A – Layer List

LAYER	DOWNLOADABLE
ADMINISTRATIVE FREEHOLD	
Aboriginal Freehold	Yes
Mapsheet 100K	Yes
Mapsheet 250K	Yes
NT Outline	Yes
NT Parks	Yes
NT Sea	Yes
NTGS Projects	Yes
DIAMOND	
Chemistry	Yes
Chrome-Diopside	Yes
Chromite	Yes
Diamond Sample	Yes
Kimberlite	Yes
Macrodiamond	Yes
Microdiamond	Yes
Picro-Ilmenite	Yes
Pyrope	Yes
DRILLING	
Drill Core Reference	Yes
Drill Hole Collar	Yes
Petroleum Wells	Yes
GEOLOGY	
Faults	Yes
Geological Regions (Solid Fill)	Yes
Geological Regions (Transparent Fill)	Yes
Geology 2.5M (Solid Fill)	Yes
Geology 2.5M (Transparent Fill)	Yes
Geology_250M_Mosaic-----ECW	Yes
Mine Feasibility	Yes
Mine Operating	Yes
Mineral Occurrence	Yes
Regolith 2.5M (Solid Fill)	Yes
Regolith 2.5M (Transparent Fill)	Yes
GEOPHYSICS	
_Survey Index-Companies	Yes
_Survey Index-NTGS	Yes
Bathymetry----ECW	Yes
Combined_Radiometrics----ECW	Yes
DTM Elevation----ECW	Yes
DTM Relief----ECW	Yes
Gravity----ECW	Yes
Gravity_Hipass----ECW	Yes
Landsat_741----ECW	Yes
Landast_742----ECW	Yes
Landsat_PC2_5/4_1/7----ECW	Yes
Magnetic_Depths----ECW	Yes
Magentics_TMI----ECW	Yes

Magnetics_TMI_1VD_Drape----ECW	Yes
Magnetics_Vertical_Derivative----ECW	Yes
Potassium----ECW	Yes
Ternary_Radiometrics----ECW	Yes
Thorium----ECW	Yes
Total_Count----ECW	Yes
Total_Count_Hipass----ECW	Yes
Uranium----ECW	Yes
MINERAL TENURE *	
Exploration Licence Application	No
Exploration Licence Granted	No
ExplorationLicence Historic	Yes
Mining Reserve	No
Mining Tenure Application	No
Mining Tenure Granted	No
PETROLEUM TENURE *	
Exploration Permit Application	No
Exploration Permit Granted	No
Exploration Permit Granted Line	No
Mining Reserve	Yes
Petroleum Development Areas	No
SURFACE GEOCHEMICAL SAMPLING	
Rockchip	Yes
Soil	Yes
Stream	Yes
Wholerock	Yes
TOPOGRAPHY ^	
Locality	No
Major Locality	No
Rail	No
Roads Main	No
Roads Minor	No
Topography_250_Mosaic	No
Tracks	No
Waterbody Main	No
Waterbody Minor	No
Watercourse Main	No
Watercourse Minor	No
UNCATEGORIZED	
1 degree graticule (GDA94)	No
1 minute graticule (GDA94)	No
100km grid (MGA94)	No
10km grid (MGA94)	No
50km grid (MGA94)	No
5km grid (MGA94)	No

***** Daily update for Mineral and Petroleum information can be downloaded for Titles Information System. Please visit http://www.dmetis.nt.gov.au/tis and apply for an account to enable data download.

^ Topographical data is available from http://www.ga.gov.au/nmd/mapping/.

APPENDIX B – Search List

Bookmarks	100K Map Name and Number
	250K Map Name and Number
Mineral Occurrence	Mine by Status
	Mineral Category
	Mineral Occurrence by Major Commodity
Geochemistry	Rockchip Samples by Gold, Cobalt, Nickel
	Soil Samples by Base Metals
	Stream Samples by Base Metals
	Stream Seds Search by Au
	Wholerock Samples by Silicon
Geology	Geology by Map Unit Code
	Geology by Lithology Class
Drilling	Drill Code by Type and Location
	Drill Hole by Type and Company
Tenure	EL applicant name
	EL holder name
	EL number - application
	EL number - granted
	EP number - application
	EP number - granted
	Pipeline number
	EP applicant name
	EP holder name
	ML MC EMP EML ERL or A applicant name
	ML MC EMP EML ERL or A holder name
	ML MC EMP EML ERL or A number - granted
	ML MC EMP EML ERL or A number - application
	Pipeline holder name
	Reports on historic tenement by tenement no
	Reports on historic tenement by author